

REMARKS

The present application relates to methods of resensitizing cancer cells to the effects of chemotherapeutic agents.

Applicants request reconsideration and allowance of the application in light of the foregoing amendments and the following remarks.

Claims 2-6, 8-12, 29-33, 39-43, 55, 56, 60 and 62 are pending in this application. Claims 3-4, 9, 11, 30, 32, 39-43, 55-56, 60 and 62 have been cancelled. Claims 2, 6, 8, 10, 12, 29 and 33 have been amended.

In the Office Communication of April 15, 2004 the Examiner has rejected claims 2-6, 8, 9-12, 29-33, 39-43, 55, 56, 60 and 62 under 35 USC 112 first paragraph for failing to provide enablement for the employment of any chemotherapeutic agents and any chemosensitizing reversal agents in the instant rejected claimed method. Applicants believe the rejection can be withdrawn in view of amended claims 2, 6, 8, 10, 12, 29, 33, 39 and 43 and cancelled claims 3-4, 9, 11, 30, 32, 40, 42, 55, 60 and 62.

In response, applicant believes they have complied with 35 USC first paragraph by amending the claims described above. Applicants believe that the specification enables the invention within the meaning of 35 USC 112 and provides clear guidance. Further, compounds have been identified by those of Formula (I), Fumitremorgin A, Fumitremorgin B and Fumitremorgin C as resensitizing compounds. Applicants have further defined the cell line as S1-M1-3.2 and the chemotherapeutic agents as selected from the group consisting of mitoxantrone, doxorubicin, and topotecan. As an illustration, presented in Table 14 on page 33 of the specification are test results of resensitizing S1-M1-3.2 Human Colon Cancer Cells to Mitoxantrone and the Toxicity of Fumitremorgin A, B, C and diketopiperazines of Formula (I).

Based on the foregoing, it is respectfully submitted that the present application contains more than sufficient experimental description, testing procedures and results from the test procedures to enable the skilled artisan to make and use the invention commensurate in scope

with the amended claims. Accordingly, applicants respectfully ask the Examiner to reconsider and withdraw the 35 USC first paragraph rejection.

The Examiner has rejected claims 2, 4-6, 8-10, 29-31, and 39-41 under 35 USC 102(b) as being anticipated by Abe et al. (Br. J. Cancer, 1995, 72, page 418-423).

Applicants respectfully traverse the 35 USC 102(b) rejection in view of amended claims 2, 6, 8, 10 and 29. Applicants have amended claims 2, 8 and 29 in order to overcome the Abe et al. reference and to particularly point out the chemosensitizing reversal agents as those of Formula (I), Fumitremorgin A, Fumitremorgin B and Fumitremorgin C. In addition applicants have amended claim 2 and 8 to define the cell line as S1-M1-3.2. Applicants have further defined the chemotherapeutic agents as those selected from the group consisting of mitoxantrone, doxorubicin, and topotecan in dependent claims 5, 10 and 31.

Applicants believe they have overcome the 35 USC 102(b) rejection of Abe et al by defining not disclosed or anticipated resistant cancer cell line S1-M1-3.2, the chemosensitizing reversal agents as those of Formula (I), Fumitremorgin A, Fumitremorgin B and Fumitremorgin C and the chemotherapeutic agents as those selected from the group consisting of mitoxantrone, doxorubicin, and topotecan in amended claims.

Applicants respectfully request the Examiner to reconsider, withdraw the 35 USC 102(b) rejection and allow the claims.

The Examiner has rejected claims 2, 4-6, 8-10, 29-31 and 39-41 under 35 USC 102(b) as being anticipated by Greenberger et al (Oncology Research, Vo. 8, No. 5, pp 207-218).

As described by the Examiner, Greenberger et al. discloses chemosensitizing agent that restored sensitivity to drugs in the multidrug resistance (MRD) phenotype in cell lines that overexpress P-glycoprotein. Such agents resensitized drug-resistant tumors to vinblastine or doxorubicin in an ascitic or solid tumor model respectively.

Applicants respectfully traverse the 35 USC 102(b) rejection. Greenberger et al. describe a chemosensitizing agent for P-gp (MDR1) mediated MDR while in contrast the instant

invention describes sensitized cells that do not express P-gp or MRP, i.e. exhibit non P-gp /non MRP MDR.

Applicants have amended claims 2, 8 and 29 in order to overcome the Greenberger et. al. reference and to particularly point out the chemosensitizing reversal agents as those of Formula (I), Fumitremorgin A, Fumitremorgin B and Fumitremorgin C. In addition applicants have amended claim 2 and 8 to define the cell line as S1-M1-3.2. Applicants have further defined the chemotherapeutic agents as those selected from the group consisting of mitoxantrone, doxorubicin, and topotecan in dependent claims 5, 10 and 31.

Applicant respectfully requests the Examiner to withdraw the 35 USC 102(b) rejection.

Applicants point out to the Examiner that by Express Mail on January 22, 2003 a petition under 37 CFR § 1.48(a) to add inventor Sridhar Krishna Rabindran and a request for a corrected filing receipt was acknowledged by return stamped postcard. Applicants have not received a corrected filing receipt and PAIR does not indicate the addition of inventor Sridhar Krishna Rabindran. Applicants request clarification.

In conclusion, applicants respectfully request that the Examiner enter the amendment, reconsider the rejections in light of the remarks herein, amendments to the claims, and allow the application. Favorable treatment is earnestly solicited.

Respectfully submitted,



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